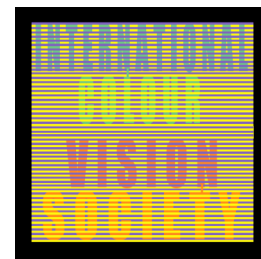


DALTONIANA

www.icvs.info

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October 2005



PRESIDENT'S MESSAGE



ICVS 2005 LYON

This year's ICVS meeting attracted over 100 attendees and the meeting was a great success. Thanks from the Society to Ken and David for their efforts. Organizing a meeting is complex and involves a diversity of details, including everything from negotiating the locale, food and transportation to stuffing programs into satchels. The meeting ran with extraordinary efficiency and the science was of high quality. We are pleased that the Proceedings from the meeting will again be published in *Visual Neuroscience*.

ICVS SPONSORSHIPS/PARTNERSHIPS OF OTHER MEETINGS

I am pleased to inform you that the ICVS is co-sponsoring two upcoming meetings. Largely through the efforts of Joe Carroll, the ICVS will be listed as a sponsor for the Optical Society of America Fall Vision Meeting (Tucson AZ, Oct. 21-23, 2005: <http://www.osavisionmeeting.org>). Thanks to John Barbur for arranging co-sponsorship of a two day course entitled *COLOUR VISION: Fundamental Studies and Clinical Applications* at City University (London, Nov. 4-5, 2005: <http://www.city.ac.uk/avrc>). Course details may be found elsewhere in this issue of Daltoniana.

WEBSITE

The ICVS website is going to be upgraded. We are in discussion with several website designers and hopefully the new website will be up and running within the next few months. We also

Joel Pokorny, PhD

have a new domain name, *icvs.info*. For the time being this will be linked to the current website.

DALTONIANA

After some eight years, Stephen Dain will be stepping down as the Daltoniana Editor. Stephen created the ICVS website and brought Daltoniana from the age of smudgy mimeographed issues into the age of electronic distribution of the newsletter. Thanks Stephen.

Dingcai Cao and Andrew Zele are assuming the Daltoniana editing responsibilities. The content of Daltoniana should reflect the diversity of interests of ICVS members and therefore should come from a diversity of ICVS members. Please assist Dingcai and Andrew by providing them with interesting content.

TRANSITIONS

After eight years, Ken Knoblauch is stepping down as General Secretary, to be replaced by Steven Buck. A simple thank you is totally insufficient for Ken, but it will have to do for the time being. We thank Ken for his expert guidance, and welcome Steve as he begins his duties.

After nine years, Anne Kurtenbach is stepping down as Treasurer and Membership Secretary, and she will be replaced by Neil Parry. Many thanks to Anne for her very hard work, and best of luck to Neil for a smooth transition as he begins his duties in this important position.

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MESSAGE FROM GENERAL SECRETARY

Steven Buck, PhD



I am honored to be able to take over as General-Secretary of ICVS and thankful that this responsibility has been passed to me from hands as capable as those of my predecessor, Ken Knoblauch. Ken will surely continue to make important contributions to

ICVS and colour science but he has already left a notable legacy. In the eight years of his tenure as General-Secretary, Ken provided steady leadership on countless issues, both visible and behind the scenes. Among those, his arrangement of proceedings publications with the journal *Visual Neuroscience* stands out for its immediate and long-term impact, with timely and wide electronic distribution of members' scientific contributions. And all of those who attended will always remember the Lyon symposium, which Ken coordinated with David Alleysson and gracious and capable assistants, as a great scientific and social / cultural occasion.

Looking to the future, we have another exciting symposium ahead of us in Brazil in 2007 and the promise of symposia in Portugal and Norway beyond that. Although we don't want our success to cause us to grow beyond the type of society we are now, we do want to renew our membership and to continue to evolve at the forefront of colour science. I ask each of you to spend a few minutes thinking of one or two colour-vision researchers whom you would like to be part of ICVS, then talk to them about how ICVS has benefited you and could also benefit them. The Directors of ICVS are taking action on new initiatives to publicize ICVS and link it to related organizations that I'll report on in future issues. However, none of this supplants the importance of the direct role that each of you can take to ensure the scientific vitality of ICVS.

Editorial

Dingcai Cao, PhD and Andrew J. Zele, PhD

d-cao@uchicago.edu zele@uchicago.edu

We are pleased to assume the role of Daltoniana Editors from Dr. Stephen Dain. Daltoniana is the quarterly publication of ICVS that bridges the society and its members to serve as an information resource. Each issue will include messages from the Society, as well as new developments, experimental techniques, websites, abstracts and publications relating to all areas of colour research. For it to be a complete and useful resource it requires the input of all ICVS members. Please forward us any colour science related information that you feel would be of interest to the ICVS members.

Elections

Steven Buck, PhD

Coming soon! Online Directors Committee elections.

Every two years, half the positions for a 4-yr term as "committee" members of the Directors Board come up for election. This year, there are nine candidates for the five open positions: *Rigmor Barass, Stephen Dain, Marina V. Danilova, Kenji Kitahara, Ken Knoblauch, Barry Lee, Del Lindsey, John Mollon, and Hannah Smithson.*

We are finalizing details that will allow ICVS members to cast their votes anonymously on a secure web site. The system was developed at University of Washington where it is used to conduct all manner of surveys and official elections. Only individuals designated to the system can vote and only one ballot will be accepted per individual. I will receive a tabulation of the votes but will not see any individually identifiable responses. To access the elections web site, members will need an individual URL "key" that will be emailed around the beginning of October. The election will be open for voting until December 1, 2005.

VERRIEST MEDAL WINNER 2005

Prof. John Mollon, PhD

University of Cambridge

This award is bestowed by the Society to honor long-term contributions to the field of colour vision. If the field of colour vision was itself a rainbow, then Professor Mollon's contributions cover nearly its full spectrum, including the isolation and elucidation of basic chromatic coding mechanisms and the constraints that they impose on human (and more generally primate) visual performance, the genetic basis of spectral coding mechanisms, the ecological influences on and evolutionary origins of chromatic discrimination. He has been instrumental in the design of several new colour

MEMBERSHIP & TREASURY REPORT

Anne Kurtenbach, PhD



Members in the ICVS come from 23 different countries. The number of members at the present time is comparable to that of previous years: For the period 2005-6 we have 128 members at this point, for the period 2002-4 there were 127 members and for the years 2000-1 there were 134 members. There has been a welcome rise in the number of student members over the last years, which increased from 9 in 2000-1 to 18 in 2003-4, and has risen again to 33 student members in the present membership period. Seven of the members are retired, which is similar to that of previous years (10 in 2000-1 and 7 in 2002-4) and the number of honorary members rose from 5 in 2000-1 to 10 at the present time.

Financially the ICVS is in a stable position. Income is generated almost exclusively from the membership dues which have remained the same for over ten years. A large part of the income is used to publish the proceedings of the biannual symposium, which every member receives free of charge. Due to a sinking of the expenditure for the proceedings in the last years, we were able to offer travel grants for the first time to those who otherwise would not have been able to attend the meeting in Lyon. Thirteen travel grants were awarded with a total value of over 6,000 Euros.

vision tests and has extensively exploited abnormal models, both congenital and acquired, to further our understanding of normal mechanisms. He is especially appreciated for his keen and profound sense of the history of science, in particular with respect to the field of colour vision.

Past Verriest Medal Winners

2003. André Roth
2001. Donald I. Macleod
1999. John Krauskopf
1997. Jack Moreland
1995. Vivianne C. Smith and Joel Pokorny
1993. Marrion Marré
1991. Harry Sperling

ICVS Belém 2007



The July 2007 ICVS Meeting will be held in Belém, Brazil. Santa Maria de Belém do Grão Pará is the city official name. It was founded in 1616 by the Portuguese Francisco Caldeira. It is located in a

strategic position to guard the Amazon River delta, protecting the Portuguese's from invaders coming from the Atlantic Ocean. Belém's architecture reflects the Portuguese ability to adapt themselves to new environments, different climates. Belém has flourished with Amazon forest richness: Brazil wood, rubber tree, and more recently gold and other minerals. The Amazon forest biodiversity is a high on the list of Brazilian interests. Belém is paved with mango-trees, which make arches on the main avenues. The mango-tree shadows are nice refuges on sunny days and also in the raining season... However, all the cars in Belém carry the marks of mangos that fall from the trees!



Meeting Organizers:

Dr. Luiz Carlos de Lima Silveira
Universidade Federal do Pará
luiz@ufpa.br

Dr. Dora Fix Ventura
Universidade de São Paulo
dventura@usp.br

New Methodologies for Colour Vision Research

Ultra-Bright Light Emitting Diodes

Juan Manuel Benavides and Robert H. Webb

Ultrabright light emitting diodes (LEDs) are a new light source for visual psychophysics and microscopy. The new LEDs are intended primarily for room and exterior illumination, and the manufacturers' specifications are adequate for that. However, we use them as light sources in situations where a more complete characterization may be useful. For one set of LEDs we have measured the radiometric intensity and its distribution in space and wavelength, and we have tested for interactions of these variables and their dependence on driver configuration. We describe techniques for making these measurements and give a link to a simple calculator for converting among radiometric and photometric measures, as well as an evaluation of the safety considerations these very bright sources demand.

Abstract from APPLIED OPTICS Vol. 44 (19) 4000-4003, 2005

Methods for evaluating the signs and magnitude of cone inputs to visual neurons

The specificity of cone inputs to ganglion cells has implications for the development of retinal connections and the nature of information transmitted to higher areas of the brain. We introduce a rapid and precise method for measuring signs and magnitudes of cone inputs to visual neurons. Colours of stimuli are modulated around circumferences of three colour planes in clockwise and counterclockwise directions. For each neuron, the projection of the preferred vector in each plane was estimated by averaging the response phases to clockwise and counterclockwise modulation. The signs and weights of cone inputs were derived directly from the preferred vectors. The efficiency of the method enables us to measure cone inputs at different temporal frequencies and short-wavelength-sensitive (S) cone adaptation levels. The results show that S-cone inputs to the parvocellular and magnocellular ganglion cells are negligible, which implies underlying connectional specificity in the retinal circuitry. Kindly provided by Hao Sun, Hannah Smithson, Qasim Zaidi and Barry B. Lee

WEB SITES OF INTEREST

Joe Carroll, PhD

Neitz Lab:	http://www.mcw.edu/cellbio/colorvision/introduction.html
Laboratory of Dale Purves:	http://www.purveslab.net/
Causes of Colour:	http://webexhibits.org/causesofcolor/index.html
Online Farnsworth-Munsell 100-Hue Test:	http://www.torok.info/fm100/
RIT Munsell Colour Science Laboratory:	http://www.cis.rit.edu/mcsl/
Colorblind Vision Simulation:	http://www.vischeck.com/
A New Web-Based Colour Vision Test:	http://www.city.ac.uk/avrc/colourtest.html
Colour Vision Store:	http://www.colorblind.to/
Ahnelt Lab: Functional Retinal Morphology:	http://www.univie.ac.at/Vergl-Physiologie/doc/ret-home.html

Course Info

Fundamental Studies and Clinical Applications

<http://www.city.ac.uk/avrc> (Provided by John Barbur)

Host Institution: Applied Vision Research Centre, The Henry Wellcome Laboratories for Vision Sciences, City University, Northampton Square, London, EC1V 0HB.

Dates: Friday & Saturday: 4 & 5 November 2005

Cost: £ 145 / day registration* (normal rate)

£ 75 / per day (student rate)

*20 % reduction available to ICVS and CG GB members. The fees include lunch and refreshments.

Contact: Vanessa Clarke, Research Administrator, V.Clarke@city.ac.uk, Tel: +44 20 70400193

Course Description: The two-day event is aimed at those who wish to understand the fundamentals of colour vision and the effects on chromatic sensitivity that result from changes in stimulus parameters and / or the properties of the eye. Emphasis will be placed on clinical applications and the need to evaluate how loss of chromatic sensitivity can affect visual performance in some work environments.

Who Should Attend: Ophthalmologists, medical and psychology students, optometrists, occupational health professionals, artists/painters/dyers, vision scientists, industrial colour measurement & reproduction specialists

Provisional Programme

- J. Barbur 10:00-10:30, Day 1
The language and measurement of light and colour
- S. Grant 10:30-11:00, Day 1
The anatomy and physiology of colour pathways

- K. Knoblauch 11:00-11:30, Day 1
Development and maturation of chromatic pathways
- K. Mullen 12:00-12:30, Day 1
Development of colour cognition in young children
- J. Neitz & M. Neitz 12:30-13:00, Day 1
Genetics of colour vision
- J. Birch 14:00-14:30, Day 1
Congenital colour vision deficiencies – a clinical prospective
- M. Rodriguez-Carmona 14:30-14:45, Day 1
Psychophysics of colour vision – isolation of chromatic mechanisms
- M. Pacheco-Cutillas 14:45-15:15, Day 1
Effects of aging and glaucoma on chromatic sensitivity
- G. B. Arden 15:15-15:45, Day 1
Clinical applications of colour vision testing
- R. Weale 16:15-16:45, Day 1
Colour anomalies and art / the effects of aging on colour vision
- G. Plant 16:45-17:15, Day 1
Disorders of colour vision in Neurological disease
- A. Hurlbert 17:15-18:00, Day 1
Colour constancy in context
- J. Neitz & M. Neitz 10:00-10:30, Day 2
Genetic predictions and chromatic sensitivity loss
- J. Barbur 10:30-11:00, Day 2
The genetics of unusual Nagel matches
- G. Plant 11:00-11:30, Day 2
Cerebral achromatopsia revisited
- S. Shevell 12:00-12:30, Day 2
Colour perception in context
- K. Mullen 12:30-13:00, Day 2
Processing of colour signals in the cortex – fMRI studies
- Multiple Instructors 14:00-16:00, Day 2
Lab demo / practicals
- Group Discussion 16:30-17:30, Day 2
Colour Vision Assessment Methods and Standards

ICVS Membership Application 2005-2006

Membership of ICVS is in 2-year cycles. For the period 1/1/05 to 31/12/06, the subscription is €128 (regular members) or €27 (retired and student members). These fees include all our transaction processing charges. All members are entitled to receive a copy of the proceedings of the two-yearly conference, held in Lyon in July 2005. Payment can be made by **Credit card**. Please go to the membership page of the ICVS website (www.icvs.info) and follow the appropriate links. If the online payment link is not active, please email me and I will send you a message with a link in it. **If you are paying on line you do not need to complete this form.** For cheque payments, please complete the enclosed form and mail it with a cheque either in Euros or in your own currency. Please send this form with your cheque to:

Dr Neil Parry, ICVS Membership Secretary, Vision Science Centre, Manchester Royal Eye Hospital, Oxford Road, Manchester M13 9WH, UK. Email: NPARRY@fs3.scg.man.ac.uk

If you have any questions about your payment or other membership issues, please contact Dr. Parry.

Section 1 *All postal applicants should complete sections 1 and 3*

Title	First Name	Last Name	Renewing	New
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Institution				
<input type="text"/>				

Section 2 *Only for new members or existing members with change of address*

Address	Postcode / ZIP
<input type="text"/>	<input type="text"/>
	Country
	<input type="text"/>
Telephone	Fax
<input type="text"/>	
Email address	
<input type="text"/>	

Section 3 *Payment details*

Check 1 box	Cost €	Your currency	Your payment*
<input type="checkbox"/> Regular	128	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Retired	27	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Student	27	<input type="text"/>	<input type="text"/>

* Cheques should be made payable to "International Colour Vision Society"